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FRI0336

CONCOMITANT USE OF BIOLOGIC DMARDS WITH CSDMARDS INCREASES DRUG RETENTION RATE AND IMPROVES TREATMENT RESPONSE IN THE PSORIATIC ARTHRITIS. HUR-BIO REAL LIFE RESULTS

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Background: For inflammatory arthritis, drug retention is accepted as an important indicator of the effectiveness and safety of biological drugs.

Objectives: The objective of this study was to determine of the effects first and overall bDMARD drug retention rate during concomitant csDMARD in psoriatic arthritis (PsA).

Methods: HUR-BIO (Hacettepe University Rheumatology Biologic Registry) is a prospective, single center database of biological treatments since 2005. All PsA patients (469) who enrolled in HUR-BIO registry and prescribed at least once biologic DMARD (bDMARD) were included in the study. The subjects were divided into two groups depending on whether or not to use csDMARDs (methotrexate, sulphasalazine or leflunomide) at the last control visit. Demographic, clinical and therapeutic data were collected from this database. Baseline disease activity before the first bDMARD initiation was assessed with DAPSA and PsAID-12.

Table. Demographics, baseline and follow-up clinical characteristics of PsA patients

	With concomitant csDMARD n=288	Without concomitant csDMARD n=167	p
Age (mean, SD)	48.9 (12.1)	45.1 (12.4)	0.002
Female n (%)	204 (70.8)	113 (67.7)	0.48
PsA disease duration (med, IQR)	7 (13)	7 (14.5)	0.53
Age at PsA diagnosis (mean, SD)	39 (11.7)	40.8 (12.9)	0.81
BMI (mean, SD)	29.6 (6.0)	29.2 (5.9)	0.53
Axial involvement n (%)	68 (34.0)	37 (44.6)	0.09
HLA-B 27 (+) n (%)	21/76 (27.6)	17/69 (24.6)	0.68
Duration of use first bDMARD (months) (med, IQR)	22.4 (51.3)	14.1 (31.4)	0.003
Duration of use overall bDMARD (months) (med, IQR)	56.8 (69.4)	24.4 (57.7)	<0.001
Switching bDMARD (+) n (%)	148 (52.5)	71 (42.8)	0.04
Initial DAPSA ¹ (med, IQR)	19.4 (11.7)	17.3 (10.2)	0.04
Initial PsAID ² (med, IQR)	5.7 (3)	5.6 (2.8)	0.55
Final visit PsAID ³ (med, IQR)	2.8 (3.8)	2 (5.7)	0.41
Final visit DAPSA ⁴ (med, IQR)	10.2 (12.4)	12.5 (12.5)	0.01
Remission (n, %)	61 (23.9)	27 (17.6)	0.13
Low disease activity	111 (43.5)	59 (38.6)	
Moderate disease activity	72 (28.2)	58 (37.9)	
High disease activity	11 (4.3)	9 (5.9)	

¹: n=249, ²: n=214, ³: n=109, ⁴: n=408

p<0.001

p=0.003

Results: HUR-BIO PsA registry included 469 PsA patients. Baseline, clinical characteristics and follow-up parameters were given in Table. The using overall bDMARD were adalimumab 294 (62.0%), etanercept 135 (28.8%), infliximab 119 (25.4%), certolizumab pegol 107 (22.8%), secukinumab 67 (14.3%), golimumab 58 (12.4%), ustekinumab 25 (5.3%) and tofacitinib 11 (2.3%). Two hundred eighty eight (61.4%) patients used concomitant csDMARDs [methotrexate 176 (37.5%), leflunomide 94 (20.0%), sulphasalazine 35 (7.5%) and two csDMARD combination 17 (3.6%)]. The first-year retention rate of first bDMARD with or without concomitant csDMARDs were 88% and 80%, respectively. The median duration of first bDMARD retention with or without concomitant csDMARDs were 131.7 and 91.4 months, respectively (Figure). The first-year retention rate of overall bDMARDs with or without concomitant csDMARDs were 92% and 85%, respectively. The median drug retention rate of overall bDMARD in using csDMARD and not using csDMARD were 141.5 and 131.5 months, respectively. Retention rates (both for first bDMARD and overall bDMARDs) were significantly higher in concomitant csDMARDs using group (p=0.003 for first bDMARD retention, p<0.001 for overall bDMARDs retention, log-rank; Figure). In concomitant csDMARD using group, no differences were identified methotrexate or other csDMARDs.

Conclusion: In this study, csDMARDs, either methotrexate or leflunomide/sulphasalazine have additional effect for both retention rate and treatment response of bDMARDs. On the other hand, using bDMARD monotherapy is relatively higher than rheumatoid arthritis (1).

Figure. Drug retention rate of the first bDMARD and overall bDMARDs according to concomitant csDMARD use (csDMARD:conventional synthetic Disease Modifying Antirheumatic Drug)

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FRI0337

REAL WORLD SECUKINUMAB DRUG-SURVIVAL IN PSORIATIC ARTHRITIS

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Background: Secukinumab (Cosentyx) is a human IgG1 monoclonal antibody that selectively binds to and neutralizes IL-17A. Several prospective randomized control trials have demonstrated the efficacy and safety of secukinumab in PsA, but there is a paucity of real life data in the PsA population.

Objectives: To prospectively study secukinumab's safety, efficacy, and tolerability in the cohort of PsA patients from the Israeli registry of inflammatory diseases.

Methods: PsA patients fulfilling the CASPAR criteria from the Israeli registry of inflammatory diseases were included in the analysis, from 2010 to November 2019. The primary end point was secukinumab drug survival compared to other available TNFi drug. Bivariate and multivariate analysis of the factors that affect the drug event free survival was done by cox regression analysis. Drug survival according to treatment line (all treatment lines, or 2nd and above treatment lines) was examined using Kaplan-Meier curves.

Results: Four hundred and four PsA patients were included, which had 709 treatment episodes (initiations) during the study period. Ninety patients had been treated with secukinumab (22%). Secukinumab treated patients were significantly older at time of initiation of treatment, and disease duration was longer. Secukinumab was more likely to be a second, third or fourth line of treatment than the TNFi. Time to an inefficacy event was longer for secukinumab than any other anti-TNF treatment. As a first line treatment secukinumab had drug survival similar to other TNFi. As a second or third line treatment, secukinumab had a better drug survival than other TNFi. Methotrexate did not have a significant effect on inefficacy event rate in combination treatment with secukinumab. Secukinumab, as infliximab and golimumab, was as effective in the higher BMI group as it was in the normal weight to obese groups. Smokers (current or past) did better on secukinumab than on TNFi. Secukinumab had a similar rate of adverse events compared to TNFi.

Conclusion: In this multicenter real world study, secukinumab had a comparable drug survival to TNFi. As a second and beyond line of treatment secukinumab had a better drug survival and lower HR for an inefficacy event. IL-17 inhibition is an effective mechanism of action to treat PsA in real life, and should be used more frequently as a first and second line treatment.

Tables and a graph:

Table 1. Inefficacy events according to treatment and drug survival in 1, 2, and 3 years.

Drug	Total episodes	Inefficacy events (%)	HR	95% CI	P value	1 st year survival %	2 nd year survival %	3 rd year survival %
SEC	90	30 (33.3)	1		0.095	86	58	41
ETA	202	86 (42.6)	1.16	0.77-1.76	0.479	75	58	50
IFX	87	34 (39.1)	1.01	0.62-1.65	0.966	82	64	52
ADA	227	103 (45.4)	1.36	0.9-2.04	0.143	71	53	46
GOL	103	103 (50)	1.64	1.05-2.59	0.031	63	50	42

Table 2. Inefficacy events and drug survival according to line of treatment.

Drug	Total episodes	Inefficacy events (%)	HR	95% CI	P value	1 st year survival %	2 nd year survival %	3 rd year survival %
1st line								
SEC	13	2 (15.4)	1		0.216	92	92	76
ETA	130	55 (42.3)	3.25	0.79-13.34	0.101	76	59	51
IFX	28	11 (39.3)	2.88	0.64-13.01	0.168	81	63	52
ADA	103	37 (35.9)	2.63	0.63-10.91	0.183	79	63	59
GOL	25	14 (56)	4.55	1.03-20	0.045	60	50	40
2nd and 3rd lines								
SEC	34	7 (20.6)	1		0.039	90	66	66
ETA	68	29 (42.6)	1.68	0.74-3.85	0.218	73	57	51
IFX	51	20 (39.2)	1.42	0.6-3.36	0.431	85	64	54
ADA	119	62 (52.1)	2.5	1.15-5.48	0.022	65	46	35
GOL	52	23 (44.2)	2.26	0.97-5.27	0.06	65	50	46
4th line								
SEC	43	21 (48.8)	1		0.082	82	44	24
ETA	4	2 (50)	1.1	0.25-4.73	0.902	67	33	-
IFX	8	3 (37.5)	0.83	0.25-2.79	0.762	69	69	-
ADA	5	4 (80)	4.87	1.6-14.81	0.005	30	-	-
GOL	26	13 (50)	1.29	0.64-2.58	0.473	62	52	31

Figure 1. Cumulative survival without an inefficacy event of secukinumab compared to TNFα inhibitors regardless of treatment line.**Table 1. Comparison of comorbidities between psoriatic arthritis (PsA), rheumatoid (RA) arthritis and Diabetes mellitus (DM) patients. OR: odds ratio, MACE: major adverse cardiovascular events. CI: Confidence Intervals**

Comorbidity	PsA vs RA			PsA vs DM			
	PsA n=215 n (%)	RA n=215 n (%)	DM N=215 n (%)	Crude OR (95% CI)	Adjusted OR (95% CI)	Crude OR (95% CI)	Adjusted OR (95% CI)
Smoking	76 (35.4)	62 (28.8)	85 (39.5)	1.35 (0.90-2.03)	-	0.84 (0.57-1.24)	-
Obesity	50 (29.4)	24 (12.8)	79 (36.7)	2.83 (1.65-4.86)	-	0.72 (0.47-1.10)	-
Hyperlipidemia	101 (47.0)	67 (31.2)	101 (47.0)	1.96 (1.32-2.90)	-	1	-
Hypertension	62 (28.8)	51 (23.8)	97 (45.1)	1.30 (0.84-1.99)	-	0.49 (0.33-0.74)	-
Coronary disease	10 (4.7)	10 (4.7)	16 (7.4)	1 (0.41-2.45)	0.97 (0.34-2.79)*	0.61 (0.27-1.37)	0.66 (0.23-1.91)*
Stroke	8 (3.7)	2 (0.9)	7 (3.3)	4.12 (0.86-19.6)	3.74 (0.73-19.3)*	1.15 (0.41-3.22)	1.20 (0.35-4.12)*
MACE	12 (5.6)	12 (5.6)	22 (10.2)	1 (0.44-2.28)	0.94 (0.36-2.46)*	0.52 (0.25-1.08)	0.42 (0.16-1.10)*
Osteoporosis	9 (5.5)	24 (11.2)	2 (0.9)	0.46 (0.21-1.03)	0.67 (0.28-1.64)**	6.22 (1.33-29.2)	-
Depression	42 (19.5)	15 (7.0)	12 (5.6)	3.24 (1.74-6.04)	3.02 (1.57-5.81)***	4.11 (2.10-8.05)	4.85 (2.37-9.93)***
Malignancy	12 (5.6)	7 (3.3)	-	1.76 (0.68-4.55)	1.60 (0.60-4.26)****	-	-

* adjusted for age, gender, smoking, hypertension, dyslipidemia, body mass index, ** adjusted for steroids, *** adjusted for age, gender, disease duration, smoking, **** adjusted for age, disease duration

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FRI0338

SIMILAR CARDIOVASCULAR COMORBIDITY AND HIGHER DEPRESSION RATES IN PSORIATIC ARTHRITIS COMPARED TO AGE- AND SEX-MATCHED RHEUMATOID ARTHRITIS AND DIABETES MELLITUS PATIENTS

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Background: Comorbidities are frequent in psoriatic arthritis (PsA) but it is not known how they differ from other high comorbidity burden diseases like rheumatoid arthritis (RA) and diabetes mellitus (DM).

Objectives: To compare the prevalence of comorbidities in PsA vs. RA and DM patients.

Methods: 215 PsA patients were age/gender-matched with 215 RA and 215 DM patients from two tertiary hospitals. Prevalence of comorbidities (hypertension, current smoking, hyperlipidemia, obesity (BMI≥30), coronary disease [CD], stroke, MACE [combined CD and stroke], depression, osteoporosis, history of malignancies) were compared across the three groups. Within PsA group, associations between comorbidities and demographic and clinical features (e.g. enthesitis), including PsA phenotypes (RA-like vs oligoarthritis pattern and Axial-involvement vs Non-Axial-involvement) were assessed.

Results: Hyperlipidaemia, obesity and depression were more frequent in PsA vs. RA. Depression and osteoporosis were more common in PsA vs DM. In contrast, hypertension was more frequent in DM. All other comorbidities, including frequency of stroke, CD and major adverse cardiovascular events did not differ between groups. Results remain unchanged after adjustments (Table 1).

Within PsA group, depression was associated with female gender (p=0.02), older age (p=0.03), higher disease duration (p=0.04) and current smoking (p=0.04). MACEs in PsA, were associated with male gender (p=0.03), older age (p=0.0002), dyslipidaemia (p=0.003) and hypertension (p<0.0001). No differences were found between different phenotypes of PsA.

Conclusion: PsA patients had higher BMI and hyperlipidaemia compared to RA but not to DM. MACE is comparable between PsA and RA or DM, while depression is more common in PsA. Taking into account certain risk factors, screening for and management of comorbidities in PsA is important in the clinical setting.

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